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Water Quality Implementation Plan
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DRAFT CALFED WATER QUALITY IMPLEMENTATION PLAN SECTION "WATER QUALITY IMPAIRMENT BY LOW DO CONCENTRATION AND OXYGEN DEPLETING SUBSTANCES"

The following represents the specific comments of the City of Stockton on the referenced section of the Cal-Fed Water Quality Implementation Plan:

The City of Stockton would like to clarify some of the statements made in the "Water quality impairment by low dissolved oxygen concentration and oxygen depleting substances" draft section of the CALFED Water Quality Implementation Plan (WQIP).

The WQIP should not focus on specific examples of general water quality problems, because this places an over-emphasis on those areas which have already been investigated by on-going programs. For example, there appears to be an over-emphasis on the effects of low dissolved oxygen (DO) concentrations in the Stockton area. Four of the 27 actions in the January 1998 Water Quality Program Plan are related to this one problem area. Urban and industrial runoff action 3 (DO depletion), wastewater and industrial discharge actions 2 (DO depletion) and 4 (ammonia toxicity) and agricultural drainage and runoff action 6 (upstream nutrients) each address the effects of various substances on dissolved oxygen concentrations in the Stockton or lower San Joaquin River area. The discharge of ammonia and BOD from the Stockton Regional Wastewater Control Facilities (RWCF) are identified specifically in wastewater and industrial discharge actions 2 and 4.

The CALFED Water Quality Implementation Plan should provide a more general, integrated (i.e. comprehensive) description and understanding of the inter-related sources, transport, and transformation processes within the Delta tributary watersheds and stream channels, without site-specific identification of potential problems nor recommendations of site-specific solutions prior to the performance of detailed technical studies and evaluation of alternatives.



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The City of Stockton strenuously objects to the exaggeration of the potential DO problems in the Stockton area as described in the draft WQIP section "Water quality impairment by low dissolved oxygen concentration and oxygen depleting substances". For example, calling the potential DO problems near Stockton the "largest in the CALFED geographic scope" and characterizing the DO concentrations here to be "below the 5 mg/l standard each year between June and November" is not accurate. Stockton DO problems have received a great deal of previous attention, but the current DO conditions are carefully monitored by the City and by others and DO only occasionally drops below 5 mg/l. The recent report by City of Stockton, *Potential Solutions for Achieving the San Joaquin River DO objectives* (Stockton Exhibit 34 in Phase 5 of SWRCB Bay-Delta water right hearings) should be reviewed to provide a more appropriate summary of recent (1985-1996) DO conditions, based on the combination of DWR monitoring and routine measurements by the City of Stockton. DO concentrations are generally above the 5 mg/l standard except during some periods that appear to be associated with "algal blooms", reverse or no flow conditions, and other river processes (i.e. intermittent high river nutrient loads) rather than the more constant RWCF discharges.

The City of Stockton agrees with the recommendation that field studies are needed to better identify and quantify the relative contribution of the factors and processes that may cause periods of low DO concentrations, rather than immediately identifying the RWCF discharge as the dominant source.

The City has invested considerable time and money to develop and test an accurate water quality model for the San Joaquin River in the vicinity of Stockton. This model is being used to investigate and evaluate alternative river management strategies. A more careful reading of the available water quality model reports would indicate that the RWCF is the source of some of the BOD and ammonia in the river, but that sediment oxygen demand and algal respiration are the dominant mechanisms causing low DO during simulated low flow periods. The contribution of the RWCF discharge to organic sediment deposits (i.e. VSS) is relatively small compared to river loads of organic materials. The City of Stockton does not agree and has considerable data to disprove that the RWCF discharge contributes 43% of the oxygen demand in the San Joaquin River during low flow periods.

The description of the turning basin as a major source of BOD for the ship channel may not be accurate. Low DO concentrations are observed in the turning basin near the bottom, but this is not necessarily having a major effect on the San Joaquin River DO concentrations. The water movement between the turning basin and the ship channel as well as the concentrations of DO and

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BOD in the water should be more intensively monitored. The effects of the Corps of Engineers aeration jet, that was installed at the mouth of the turning basin as mitigation for DO effects from the Ship channel deepening, should be included in this investigation.

The statement that the current strategy of increasing flows with a temporary barrier in the fall "has little effect on DO concentrations in the oxygen sag in dry and critically dry years" is not sufficiently documented by the DWR longitudinal DO profiles. The increased flows are not expected to remove the DO sag, but rather to maintain a DO concentration of greater than 5 mg/l. The CALFED WQIP document cannot claim to be scientifically based if it contains pre-judged solutions that have not been tested.

The scientific and technical needs section does not reference the previous and on-going efforts of DWR, City of Stockton, Corps of Engineers, and the Central Valley Regional Water Quality Control Board (CVRWQCB) to provide an accurate understanding of factors controlling DO concentrations. The combination of monitoring, modeling, and management actions are the three ingredients of adaptive management. These are supported by the City of Stockton. Because these issues are being addressed in the SWRCB water-right hearings, CVRWQCB regulatory activities, and environmental documentation for the RWCF expansion program, CALFED should support the coordination of these on-going programs, rather than initiate some new management actions.

Specifically identifying the urban channels in the Stockton area as the only urban streams with stormwater runoff problems is very misleading. It is difficult to see the possible linkages of Stockton urban stormwater runoff to the CALFED water quality objectives. Nevertheless, a more general discussion of urban and rural runoff water quality issues would be more appropriate for the WQIP.

The first recommended management action- further regulation of the Stockton RWCF discharge- does not reflect any consideration of previous regulatory history, nor is it based on an evaluation of benefits and costs (economical and environmental) of alternative management actions. The WQIP should require a careful evaluation of management alternatives rather than suggest a solution prior to appropriate technical investigations.

The CALFED document should recommend and support efforts by the CVRWQCB to initiate a watershed-based comprehensive TMDL evaluation and allocation for sources of BOD and nutrients that includes the effects of biochemical oxidation and eutrophication processes on DO. This comprehensive TMDL evaluation is the proper basis for targeting management actions that

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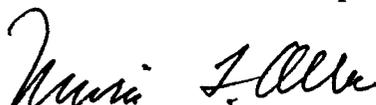
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will best achieve the established water quality objectives.

The City of Stockton is actively involved in the technical evaluation of DO conditions and alternatives for managing water quality in the lower San Joaquin River channels within the Delta. We suggest that the CALFED water quality implementation plan should support these ongoing investigations and discussions, without making independent recommendations that are not supported by appropriate technical studies and monitoring results.

Additionally, we are sending you our entire Bay-Delta testimony and exhibit package under separate cover from the law office of DeCuir & Somach for your review and reference in terms of better understanding our comments. This testimony is being provided to the SWRCB under Phase 5 of the Bay-Delta water rights hearings. This package of testimony and exhibits is comprehensive in terms of the City of Stockton's position relative to the Delta and the water quality effects of the San Joaquin River in the location of Stockton.

The City of Stockton requests a meeting with the Water Quality Program committee so that we might discuss in detail these comments and the various implementation plans that are presently being reviewed by your agency. Please contact me to establish a schedule for this type of meeting and who from the Cal-Fed program staff we could meet with.



MORRIS L. ALLEN
DIRECTOR OF MUNICIPAL UTILITIES

attachment

cc: Paul Simmons, DeCuir & Somach
Gary Ingraham, Assistant City Manager
Don Dodge, Assistant Director of Municipal Utilities